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EAR-DISEASE
AND
LIFE-ASSURANCE.

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EAR-DISEASE AND LIFE ASSURANCE.*

IN 1875, a gentleman, aged 30, applied to an old-established and wealthy insurance company to effect an insurance on his life. The medical officer of the company, having examined the proposer, was quite satisfied with the life, save in one respect, and that referred to the condition of the gentleman's right ear, from which there came a constant but scant discharge of pus-like fluid. I have no means of knowing whether the proposer gave voluntarily the information concerning the existence of this ear-discharge to the medical examiner, or whether it was discovered by this gentleman in the course of the examination; in either circumstance, it may be inferred, on the one hand, that the patient did not regard the fact of an ear-discharge as prejudicial to his acceptance by the company, and therefore as not injurious to his health; on the other, that the examination had been unusually exhaustive. From the knowledge that an ear-discharge betokened "incalculable dangers" to the life of the individual who had such a symptom, the medical referee already referred to had decided to report unfavourably upon this case, notwithstanding the otherwise highly favourable circumstances that pertained to it. With an earnest wish, however, to give the proposer every chance of acceptance, he recommended to the society that the applicant be sent to me for a special opinion as to the state of the ear. When the gentleman presented himself before me, he was in excellent general health, and had always been, he said, in an equally good condition. His family history was unexceptionable; as regarded the local affection of the ear, he gave the following history. In 1860, without any apparent cause, and preceded by no defect of the sense of hearing, the right ear began to discharge matter, and this discharge had continued from then till now—sixteen years. Except on one occasion, some years after the institution of the discharge, he never had pain in his ear at any time. On the occasion referred to, he attributed the occurrence of pain to cold caught by imprudent exposure. In reply to the direct question, whether during this painful attack the ear-discharge were in any way affected, he could give no definite reply; but thought that, from its first appearance till now, the discharge had con-

* Read before the Glasgow Medico-Chirurgical Society.

tinued unchanged, either as to quantity or to quality. It was noticed that the expression of his face was peculiar; when he laughed, it was seen that the muscles of the left side of the face were alone thrown into action, but motion in those of the right side was not quite abolished. The sensation of both sides seemed equal.

The state of the diseased ear was as follows. He was quite deaf to ordinary conversation on the right ear, and could not even hear a watch on contact, the normal hearing distance of which is six feet. The inner third of the meatus was highly congested; there was no pus or other fluid in this canal, probably owing to the fact that it had been recently cleaned out in preparation for my examination. The right membrana tympani presented numerous signs of old-standing disease, to which particular reference need not be made here. The point which interested me was the following. Traversing the whole upper segment of the membrana tympani, close to the annulus, was to be seen an oblong somewhat semilunar-shaped lesion of the membrana flaccida (Shrapnell's membrane). A probe, introduced through this aperture, passed inwards and upwards till it was arrested by the roof of the tympanum. At the moment of this contact, the patient affirmed that he felt a distinctly grating sensation, although I was quite insensible myself, not only to this, but to any similar sensation, such as one experiences when, with a probe in hand, he comes into contact with diseased bone. The left ear, though not complained of, was, nevertheless, not free from defect—defect that time and circumstances may develope.

In the report which I made, I spoke of this case as follows. "The result of the examination is to show that X. Z. suffers now from chronic inflammation and suppuration of the 'drum' of the ear, or tympanum. The ear-discharge, though moderate in quantity, and not accompanied with pain, has been, nevertheless, continuously present for a period of sixteen years. I have good grounds, therefore, to fear that latterly this suppuration is the consequence of an ulceration of the bone forming the roof of the drum-cavity. With this belief, I cannot regard his case as free from the possibility of dangerous consequences arising at any moment, so long as the discharge continues."

To this official report I appended, by way of supplement, the following remarks. "The opinion that the roof of the tympanum in this case is carious, though founded on negative evidence, yet amounts almost to a certainty, since I have never met with a case of similar ear-disease, of such long standing, without this grave complication being ascertained to exist on examination, either during life or after the death of the patient. My experience of similar cases in my own practice, during the last few years, has been both varied and extensive, at all ages and in all stages, most of them as like each other as are two peas. From the fact that many of these cases were met with in very old people (some of them being upwards of eighty years of age), and who

all life-long had suffered from this form of ear-disease, and yet had been free from trouble as regarded their ears, except that which arises from discharge and deafness, I am not disposed to regard such cases as necessarily fatal ; nor indeed so likely to give rise, for obvious pathological reasons, to affections of the brain or general system, as several other forms of ear-disease readily do. But, while saying this, I do not mean to convey the impression that they are not dangerous. On the contrary, they are highly so ; and all the more to be feared, in that the complications that may arise are incalculable as to their results. When a case of this kind terminates fatally, as is not seldom the case, one is astonished at the rapidity with which the fatal issue is approached, and the extensive destruction of the tissues, which subsequent examination reveals. For instance, I saw a case which had continued for many years without showing a bad symptom, save constant otorrhœa, and which remained free from any other one till sixteen days before death took place ; after which, examination revealed the most extensive destruction of tissues that I have ever seen as a result of ear-disease. The whole of the tissues forming the roof of the tympanum in that case was completely destroyed, as well as that portion of the temporal bone entering into the formation of the external auditory meatus. Was it conceivable, and if so, is it possible that, in sixteen days (reckoning from the onset of the more violent symptoms till the death of the patient), all this havoc was accomplished ? Another fact in connection with the case, which forms the subject of these supplementary remarks, is : the duration and source of the ear-discharge ; having existed for so many years, and coming from a part of the ear liable at any moment, from its proximity to important and vital parts, to be associated with dangerous complications, it is not prudent to shut one's eyes to the possibilities of the case. Indeed, for general guidance, it may be laid down and accepted as an axiom that, with an ear-discharge—whether moderate or copious in quantity, continuous or interrupted in its flow, short or long in its duration—*so long as it exists*, one cannot tell where, when, or how the case may terminate. For this reason alone, based as it is upon wide clinical and pathological experience, I cannot venture to predict what may be the future of the present case. The facial paralysis shows that the morbid action has, at some period in its career, implicated the Fallopian canal and its contents ;* and this fact adds to the hidden dangers of the case under notice."

* Since this paper was read, I have examined the ear of a youth aged 16, who died from basilar circumscribed purulent meningitis, arising from a chronic exanthematous catarrh of the tympanic cavity, which had lasted from infancy without a bad or violent symptom, except a continuous discharge from the ear, till two weeks before the fatal issue. In this case, the brain-disease was directly caused by the diseased action in the tympanum being propagated along the Fallopian canal, by the aid of the facial portion of the seventh pair of nerves, which was of a dark colour throughout its entire length. Although there was caries of the mastoid, yet this canal seemed to be the direct channel of communication between the original disease in the tympanum and the fatal disease of the meninges.

"If", I further added, "I may be allowed to make a suggestion, not valueless I hope, it is that, among the questions submitted to applicants for life assurance, the question be directly asked: Have you at any time suffered from an ear-discharge? Doubtless, some of the questions even now put by insurance companies to those who propose for life-assurance, give to them, as well as to the medical examiner, the opportunity of mentioning or ascertaining this fact, if it had existed or exists; but the beautiful indefiniteness of the question to which I refer more particularly—viz. : Do you know of any other circumstance not comprehended in the above questions that may render the acceptance of your proposal for insurance more than usually hazardous?—leaves a ready loop-hole for deceit on the one hand, or laxness on the other. Even where neither of these alternatives exist or can be entertained, there yet remains the fact that many of the laity, and not a few of our profession, regard an ear-discharge as not only not dangerous, but as positively salutary; in such circumstances, the true significance of this symptom, even when it is known to be present, is always overlooked, with consequences, now and again, that one may easily imagine."

The sequel of the case upon which I have dwelt remains to be told. The company for which I advised declined to accept the proposal, until the gentleman could offer to them satisfactory evidence that his ear-disease was cured. Being dissatisfied and disappointed with the result above related, he went to one of the celebrated German aural surgeons, from whom he received an opinion, which did not afford him more or greater assurance of safety; and it proved quite valueless in the eyes of the insurance company, to whom it was exhibited, as I was informed. Though I do not know the exact nature of that opinion, I am led, from that circumstance, to believe that it essentially corroborated mine. Another office, in which the gentleman was already insured, and had been for nearly ten years, hearing of this rejection, called upon him to resign his policy had from them, on the ground that no mention was made in their contract of assurance that he had a discharge from the ear. Having done so, he had the opportunity given to him to make a new proposal to the same office; this he did, with the result that the directors refused to accept his life on any terms. Recently, I was informed that he had been examined by a medical gentleman, and accepted by another office, which, in the knowledge of the ear-discharge, added a loading of five years to his age. It is but right to add, however, that the medical gentleman who passed him as a sound life for the first office, which afterwards rejected him on re-proposing, was the same who passed him on this last occasion.

It is this case, together with the knowledge that it is not a solitary one in relation to life-assurance experience, which furnishes me with the title of my paper, and gives me occasion to bring the subject thus pro-

minently before the profession, especially before those who may be advisers to insurance offices. For their consideration, I will suggest two questions that may come up in the relation of ear-disease to life assurance. These are : Suppose that an individual, in good general health, with an unimpeachable family history and regular habits, applies to have a policy of assurance effected, who is either perceptibly dull in the hearing or absolutely deaf, without any ear-discharge or lesion of tissue, ought such a one to be accepted as a first-class life ? or, it may be, ought such an individual to be accepted at all ? Again : Ought one who does suffer or has suffered from an ear-discharge, irrespective of its quantity and duration, and with or without lesion of tissue, be accepted under any circumstances or conditions ?

To attempt to reply to these questions, so as to do justice to them and to my own views as to the Etiology and Evolution of ear-disease, is impossible in the limits of a single paper. At the outset, in reply to the first question, we are brought face to face with a difficulty in the absence of a standard of average hearing distance. What, one may ask, is meant by dulness of hearing ? About absolute deafness, there is no difficulty ; but inasmuch as hearing is a relative function, what one may regard as dulness of it, may, by another observer, be regarded as very fair and good hearing ; and further, the statement, not seldom uttered in self-defence by those who are accused of hearing badly, "that there are as many imperfect speakers as imperfect hearers", must not be lightly set aside in the consideration of this question.

Apart from the consideration that, in direct proportion to the impairment of the function of hearing, so is the individual liable to meet with accidents to which others, not similarly affected, are altogether exempt.* Apart from this fact, however, I have to say that as clinical observation, and the balance of probabilities as to the etiology of ear-diseases in general, lead me to the conclusion that all idiopathic ear-diseases causing deafness, and tissue-changes accompanying them, evolve themselves from a common cause ; that the gravity of the various abnormal tissue-changes is determined solely by some of the many predisposing constitutional tendencies which the general organism may inherit or acquire anew ; that the possibilities of such abnormal tissue-changes, in degree of gravity, are beyond calculation, so soon as the normal tympanic tension is altered or disturbed, from whatsoever cause, I would recommend that no one who is deaf should be accepted as a first-class life ; but the

* It may be objected to this latter statement, that among those who make up the total number of victims of street-accidents in London, the proportion of deaf people is very small ; many accounting for this fact, by saying that those who are deaf have their cautiousness highly developed by their infirmity, and thus are protected in circumstances of danger. On the contrary, deaf people are too conscious of the dangers to which their loss of hearing exposes them, and, with characteristic good sense, avoid all recognised dangers. Of all places, the busy streets of the metropolis are therefore shunned, except by that very small number of those whom necessity or recklessness compel to go thither.

amount of loading ought to be determined by the risks to which his life is exposed by the defective hearing, as compared with that position were he free from all deafness. If there were, in addition, a syphilitic diathesis, or a well-marked catarrhal constitution, under no circumstances would I recommend such an individual to be accepted. In such a case, time and other influences may bring to issue such results, in the tissues of the ears, as are hardly realisable by general practitioners.

In answer to the second question, there is less difficulty in giving a reply; indeed, most assurance offices in this country are following the example of those in America and on the Continent of Europe, which refuse, under any conditions, to accept the proposals of those who suffer from otorrhœa. My own opinion on this point is, that this mode of procedure is too absolute; for there are many cases of ear-disease, with lesion of tissue, in which there are reasonable grounds for saying that, inasmuch as the ear-discharge is simply an excessive secretion from the hypertrophied tissues, or at all events not the result of an ulcerative process, either of those or the underlying bone, it may in a healthy constitution not only not increase, but spontaneously and permanently arrest itself; therefore, such cases should be accepted, with the addition of a small "loading" to the ordinary premium.

Finally, I would urge upon Assurance Companies that the state of the organ of hearing be specially considered in all life-assurance transactions; and especially that the exact pathological condition of the tissues, in a given case of ear-discharge, should be had regard to by their examining medical officers, before recommending the life for acceptance; otherwise time, or, it may be, greater care and better knowledge on the part of a future examiner, may show that this recommendation was to some extent unreliable.